

PRIOR ART

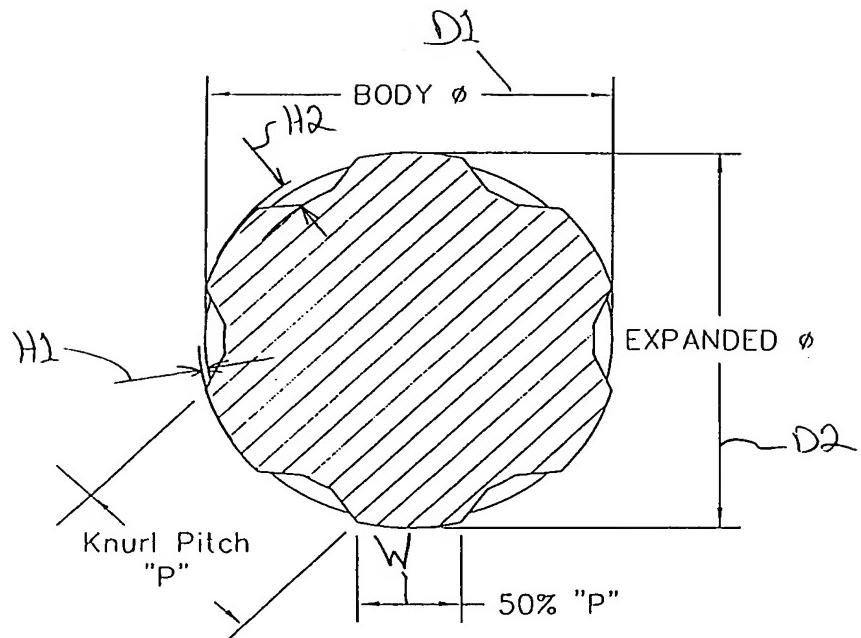


Figure 3

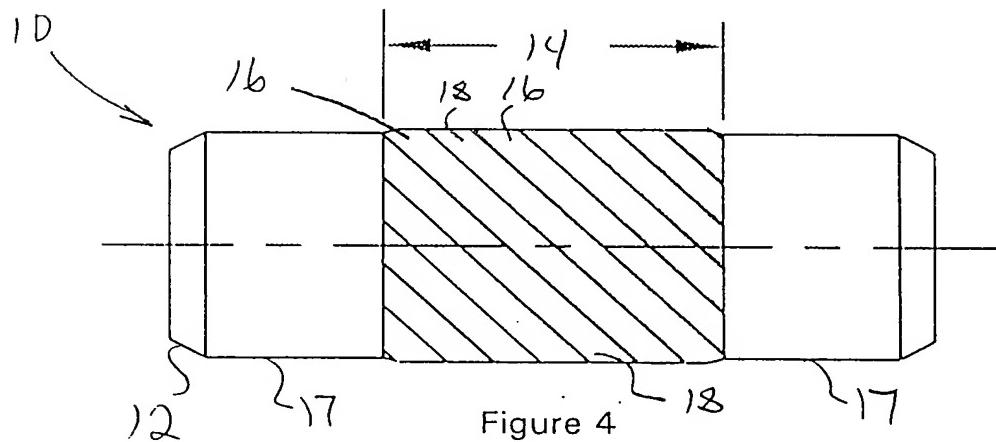


Figure 4

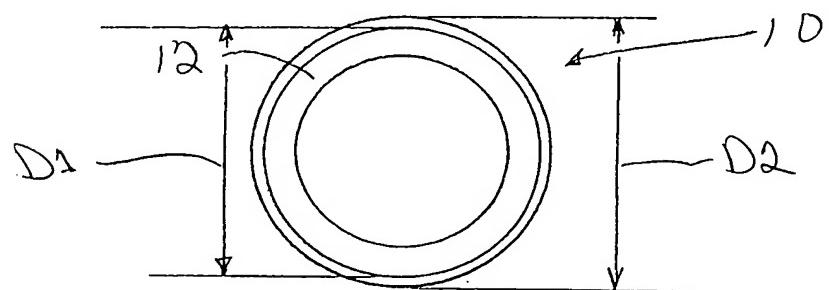


Figure 5

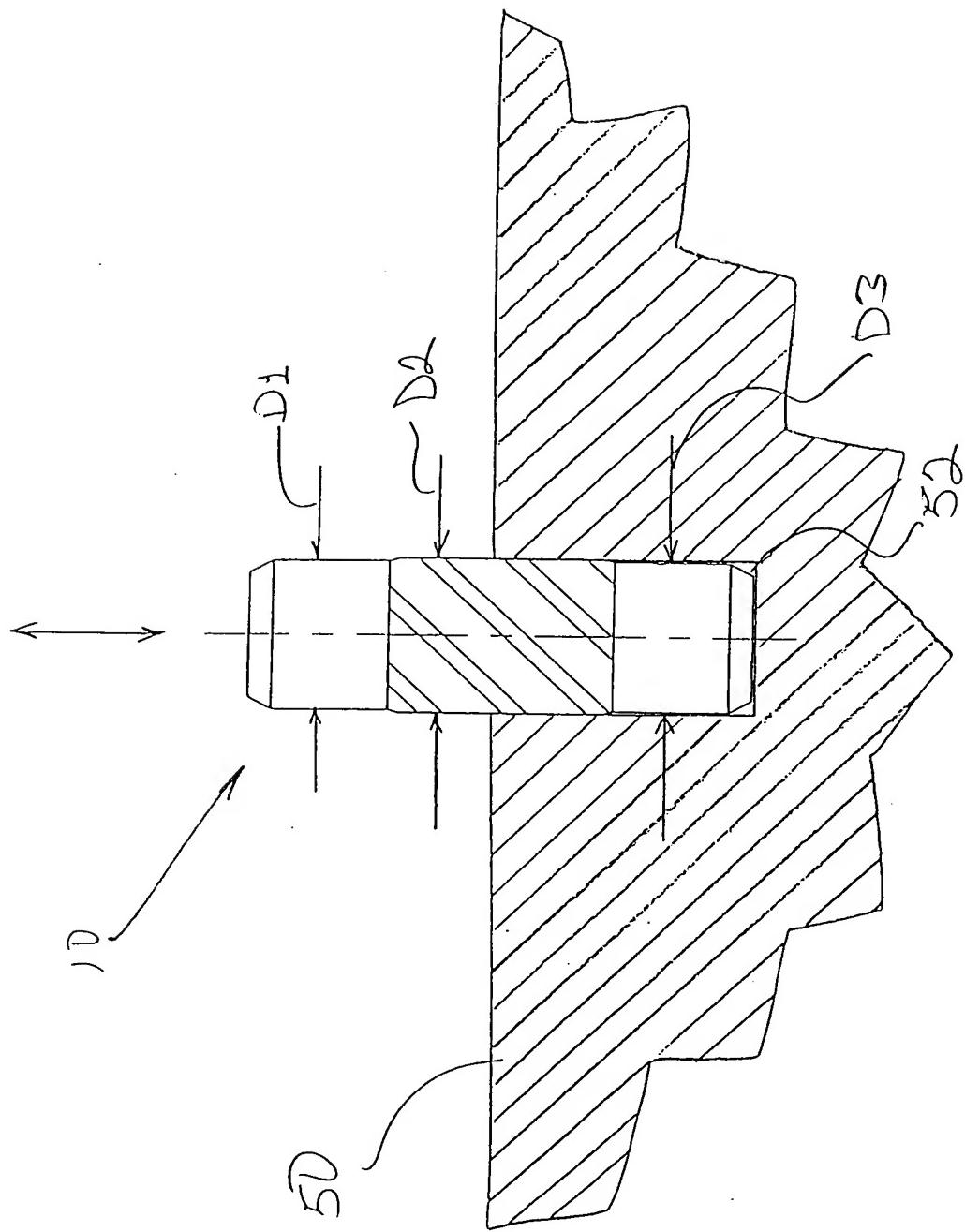


Figure 6

BEST AVAILABLE COPY

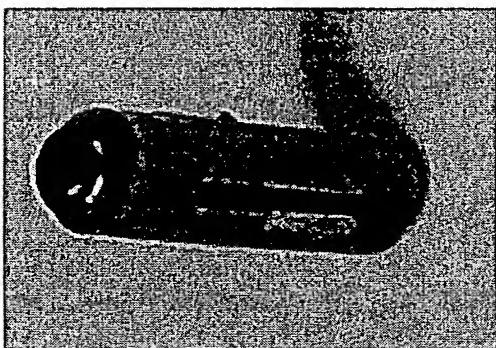
PRIOR ART



Prior Art Knurled

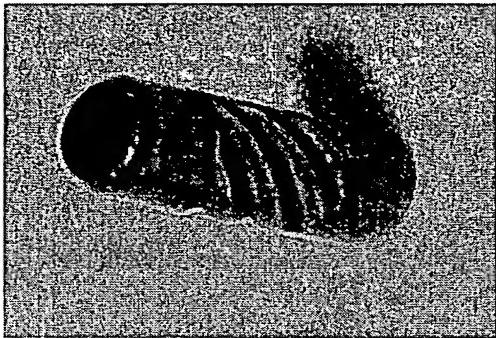
Figure 7

PRIOR ART



Prior Art Grooved Pin

Figure 8



Helical Grooved Pin

Figure 9

Nominal Diameter	Body Diameter "D1"		Hole Diameter		Expanded Diameter "D2"		D2/D1	D2/Hole Dia.
	Min	Max	Min	Max	Min	Max		
1/16	0.0605	0.0625	0.0635	0.0645	0.0655	0.0675	105%	112%
3/32	0.0918	0.0938	0.0948	0.0958	0.0968	0.0988	103%	108%
1/8	0.1230	0.1250	0.1260	0.1270	0.1280	0.1300	102%	106%
5/32	0.1543	0.1563	0.1573	0.1583	0.1593	0.1613	102%	105%
3/16	0.1855	0.1875	0.1885	0.1895	0.1905	0.1925	102%	104%
1/4	0.2480	0.2500	0.2510	0.2520	0.2530	0.2550	101%	103%

Formula

D1 Max = Nominal Diameter
 D1 Min = Nominal Diameter - .002"
 Hole Min = D1 Max + .001"
 Hole Max = D1 Max + .002"
 D2 Min = Hole Max + .001"
 D2 Max = Hole Max + .003"

Table 2

Nominal Diameter	Body Diameter "D1"		Hole Diameter		Expanded Diameter "D2"		D2/D1	D2/Hole Dia.
	Min	Max	Min	Max	Min	Max		
1/16	0.0605	0.0625	0.0635	0.0645	0.0655	0.0675	105%	112%
3/32	0.0918	0.0938	0.0948	0.0958	0.0968	0.0988	103%	108%
1/8	0.1230	0.1250	0.1260	0.1270	0.1280	0.1300	102%	106%
5/32	0.1543	0.1563	0.1573	0.1583	0.1593	0.1613	102%	105%
3/16	0.1855	0.1875	0.1885	0.1895	0.1905	0.1925	102%	104%
1/4	0.2480	0.2500	0.2510	0.2520	0.2530	0.2550	101%	103%

Nominal Diameter	Body Diameter "D1"		Hole Diameter		Expanded Diameter "D2"		D2/D1	D2/Hole Dia.
	Min	Max	Min	Max	Min	Max		
1.5	1.45	1.5	1.52	1.55	1.57	1.62	105%	112%
2	1.95	2.0	2.02	2.05	2.07	2.12	104%	109%
2.5	2.45	2.5	2.52	2.55	2.57	2.62	103%	107%
3	2.95	3.0	3.02	3.05	3.07	3.12	102%	106%
4	3.95	4.0	4.02	4.05	4.07	4.12	102%	104%
5	4.95	5.0	5.02	5.05	5.07	5.12	101%	103%
6	5.95	6.0	6.02	6.05	6.07	6.12	101%	103%

Formula

D1 Max = Nominal Diameter
 D1 Min = Nominal Diameter - 0.05mm
 Hole Min = D1 Max + 0.02mm
 Hole Max = D1 Max + 0.05mm
 D2 Min = Hole Max + 0.02mm
 D2 Max = Hole Max + 0.07mm

Table 3

Nominal Diameter	Body Diameter "D1"		Hole Diameter		Expanded Diameter "D2"		D2/D1	D2/Hole Dia.
	Min	Max	Min	Max	Min	Max		
1/16	0.0605	0.0625	0.0635	0.0645	0.0655	0.0675	105%	112%
3/32	0.0918	0.0938	0.0948	0.0958	0.0968	0.0988	103%	108%
1/8	0.1230	0.1250	0.1260	0.1270	0.1280	0.1300	102%	106%
5/32	0.1543	0.1563	0.1573	0.1583	0.1593	0.1613	102%	105%
3/16	0.1855	0.1875	0.1885	0.1895	0.1905	0.1925	102%	104%
1/4	0.2480	0.2500	0.2510	0.2520	0.2530	0.2550	101%	103%